

What is claimed is:

1. A tone control apparatus for adjusting color tones of a print made by a printing machine, by comparing image data serving as a reference  
5 and image data obtained by reading an image on the print, said apparatus comprising:

set representative point storage means for storing a representative point set by an operator to at least one of a plurality of areas corresponding to ink keys of said printing machine;

10 setting condition storage means for storing setting conditions for setting representative points to other areas corresponding to the ink keys based on the representative point set by said operator; and

representative point determining means for determining representative points for the other areas corresponding to the ink keys  
15 based on the representative point stored in said set representative point storage means and the setting conditions stored in said setting condition storage means.

2. A tone control apparatus as defined in claim 1, wherein said  
20 image data serving as a reference is image data obtained by reading an image on reference paper.

3. A tone control apparatus as defined in claim 1, further comprising means for bringing into agreement a color of the representative point  
25 stored in said representative point storage means and colors of the

representative points determined by said representative point determining means.

4. A tone control apparatus as defined in claim 1, further comprising  
5 representative point correcting means operable by the operator for  
correcting a representative point determined by said representative point  
determining means, said set representative point storage means storing the  
representative point corrected by said representative point correcting  
means.

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5. A tone control apparatus as defined in claim 1, wherein said  
representative point determining means is arranged to create a list of  
colors in the areas corresponding to the ink keys, evaluate the list of  
colors, and determine points of highest value to be the representative  
15 points.

6. A tone control apparatus as defined in claim 5, wherein said  
representative point determining means is arranged to give a high value to  
a color having a large area size.

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7. A tone control apparatus as defined in claim 5, wherein said  
representative point determining means is arranged to give a high value to  
a color similar to a color of the representative point set by the operator.

25 8. A tone control apparatus as defined in claim 5, wherein said

representative point determining means is arranged to give a high value to a point at a short distance to the representative point set by the operator.

9. A tone control apparatus as defined in claim 5, wherein said  
5 representative point determining means is arranged to give a high value to similar positions in an image including directions based on page information when making paged prints.

10. A tone control apparatus as defined in claim 1, further comprising  
10 means for copying color information on one of the representative point stored in the set representative point storage means and the representative points determined by the representative point determining means, in order to reflect the copied color information on color information of another representative point.

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11. A representative point determining method for determining  
representative points to be compared when adjusting color tones of a print made by a printing machine, by comparing image data serving as a reference and image data obtained by reading an image on the print,  
20 comprising:

a representative point setting step executed by an operator for setting a representative point to at least one of a plurality of areas corresponding to ink keys of the printing machine; and

a representative point determining step for determining  
25 representative points for other areas corresponding to the ink keys based

on the representative point set by said operator and by using setting conditions for setting representative points to said other areas.

12. A representative point determining method as defined in claim 11,  
5 wherein said image data serving as a reference is image data obtained by reading an image on reference paper.

13. A representative point determining method as defined in claim 11,  
further comprising a step of bringing into agreement a color of the  
10 representative point set by the operator and colors of the representative points determined in the representative point determining step.

14. A representative point determining method as defined in claim 11,  
wherein said representative point determining step includes a  
15 representative point correcting step for correcting a representative point determined.

15. A representative point determining method as defined in claim 14,  
wherein said representative point correcting step is executed manually by  
20 the operator.

16. A representative point determining method as defined in claim 15,  
further comprising a second representative point storing step for storing  
the representative point corrected in said representative point correcting  
25 step

17. A representative point determining method as defined in claim 11,  
wherein said representative point determining step includes:

5 a step of creating a list of colors in the areas corresponding to the  
ink keys;  
a step of evaluating the list of colors; and  
a step of determining points of highest value to be the  
representative points.

10 18. A representative point determining method as defined in claim 17,  
wherein said representative point determining step is executed to give a  
high value to a color having a large area size.

15 19. A representative point determining method as defined in claim 17,  
wherein said representative point determining step is executed to give a  
high value to a color similar to a color of the representative point set by  
the operator.

20 20. A representative point determining method as defined in claim 17,  
wherein said representative point determining step is executed to give a  
high value to a point at a short distance to the representative point set by  
the operator.